

REPORT BY THE
AUDITOR GENERAL
OF CALIFORNIA

THE STATE CAN DO MORE TO ENCOURAGE ALTERNATIVES
TO THE LAND DISPOSAL OF HAZARDOUS WASTE,
IMPROVE WASTE CLASSIFICATION,
AND PURSUE FEDERAL FUNDS FOR SITE CLEANUPS

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JANUARY 1987



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January 22, 1987

P-582.5

Honorable Art Agnos, Chairman
Members, Joint Legislative
Audit Committee
State Capitol, Room 3151
Sacramento, California 95814

Dear Mr. Chairman and Members:

The Office of the Auditor General presents its report concerning the Department of Health Services' encouragement of alternatives to the land disposal of hazardous waste, its waste classification and cleanup site scheduling processes, and its pursuit of federal funds for site cleanup.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "THOMAS W. HAYES".
for
THOMAS W. HAYES
Auditor General

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SUMMARY

RESULTS IN BRIEF

The State of California can do more to encourage alternatives to the land disposal of hazardous waste, to improve its waste classification program, and to develop better methods for establishing priorities and applying for federal funds. Because the Department of Health Services (department) does not classify wastes within the mandated time period, the department estimates that the requesting companies will incur approximately \$22 million in additional costs in fiscal year 1986-87 for handling nonhazardous waste as hazardous. Also, as a result of not actively pursuing federal funds, the State has not yet received up to \$1.7 million to conduct preliminary assessments of cleanup sites and may not receive up to \$33.5 million in federal funds for cleaning up sites.

BACKGROUND

The department is responsible for administering the hazardous waste management program, which includes an alternative technology program to promote the use of methods that reduce the amount of hazardous waste disposed of in or on land.

The number of hazardous waste disposal facilities is declining while the amount of hazardous waste disposed of is increasing. As a result of changes in federal and state statutes and regulations, hazardous waste disposal facilities are closing, and no major hazardous waste disposal facility has received a final permit. Recent legislation addresses these problems by establishing new requirements for the siting and permitting of disposal sites and for using alternative technology for reducing the amounts of hazardous waste.

PRINCIPAL FINDINGS

The Department Can Do More To Promote Alternatives to the Land Disposal of Hazardous Waste

Health and Safety Code Sections require that the department encourage and promote alternatives to the land disposal of hazardous waste. However, the department is not reviewing records of hazardous waste transported to disposal facilities or conducting effective studies of hazardous waste generated by industry to encourage the recycling of hazardous waste. Additionally, the department has not established an effective information clearinghouse or a technical reference center. As a result, some hazardous waste is unnecessarily being disposed of at the dwindling number of disposal facilities rather than being treated or recycled.

The Department Is Slow To Respond to Requests To Classify Waste

The department does not respond to requests to classify wastes within the 60-day period mandated by Title 22 of the California Administrative Code. As of October 6, 1986, the department had not responded within the mandated 60 days to 114 requests it has received since January 18, 1985. The department has recognized that the delay in classifying wastes is a problem but has failed to direct adequate resources to address the problem. As a result, the department estimates that, during fiscal year 1986-87, generators who request waste classifications will incur approximately \$22 million in additional costs and that approximately 112,000 tons of nonhazardous material will be unnecessarily disposed of in hazardous waste disposal facilities.

**Site-Cleanup Activities Are Not
Scheduled According to a
Formal Measurement of the
Relative Threat of the Sites**

The department did not schedule its cleanup activities according to the relative threat posed by hazardous waste sites to the public and the environment. As a result of not using adequate methods for establishing cleanup priorities, the department is conducting cleanup activities at sites that may pose less of a threat to the public health or the environment than do other sites that are not scheduled for cleanup. According to the department's cleanup schedule, the department may not have sufficient funds to clean up 7 of the 51 state-funded hazardous waste sites. Of these 7 sites, 4 are among the 24 most threatening sites, as measured by their assessment scores.

**The Department Does Not
Always Pursue Federal Funds**

The department does not always pursue federal funds for cleaning up hazardous waste sites. For example, as of December 15, 1986, the department had not submitted a grant application to the EPA for federal funds for preliminary assessments of cleanup sites. Additionally, the department has not applied to the EPA to include seven eligible hazardous waste cleanup sites on the National Priorities List, nor has the department addressed problems identified by the EPA concerning applications for nine sites that the EPA rejected as a candidate for the National Priorities List. As a result of not actively pursuing federal funds, the department has not yet received up to \$1.7 million for assessing sites and may not receive up to \$33.5 million in federal funds for cleaning up sites.

Corrective Action

On October 10, 1986, a department consultant completed a study of solvents, which constitute approximately 10 percent of all hazardous wastes going to disposal facilities, to identify opportunities for recycling the solvents. In addition, the department sponsored a Solvent Waste Alternative Symposium in October 1986. Also, the technical library is now staffed with one full-time librarian and one part-time librarian. Additionally, on October 9, 1986, the department's deputy director issued a memo requiring staff to prepare applications for cleanup sites eligible for listing on the National Priorities List. Furthermore, the department submitted a \$1.7 million grant application to the EPA on December 23, 1986, to fund preliminary assessments at 350 hazardous waste sites.

RECOMMENDATIONS

The Department of Health Services should take the following actions:

- Review and measure the relative effectiveness of the activities of the alternative technology program, and allocate appropriate resources to the activities that are the most cost effective. Also, use all available methods for encouraging and promoting the reduction of hazardous waste;
- Review workload requirements for classifying wastes, and allocate appropriate resources;
- Establish a method for determining priorities for the characterization and cleanup of hazardous waste sites that reflects the condition of the sites; and
- Actively pursue federal funds for the characterization and cleanup of hazardous waste sites.

AGENCY COMMENTS

The Department of Health Services concurs with the problems identified in the program areas of waste classification, the information clearinghouse, and the technical reference center, and indicates intent to comply with our recommendations in these areas. Further, the department agrees that it should review and measure the effectiveness of program elements and allocate resources to the most effective activities. However, the department states that it has done this for manifest reviews for identifying recycling opportunities.

The department agrees that it should develop a formal and verifiable system for scheduling sites for cleanup based on the relative threat of the sites. However, the department believes that its interim management decisions and reliance upon professional judgment are reasonable and responsive to public health and safety and environmental concerns.

The department indicates that it is taking steps to pursue federal funds for the assessment and cleanup of hazardous waste sites.

INTRODUCTION

The objective of California's hazardous waste management program is to protect the public health and the environment from the harmful effects of toxic waste. The Department of Health Services (department) is responsible for carrying out this objective, and, to this end, regulates the generation, treatment, storage, transportation, and disposal of hazardous waste. Also, the department manages the State's program to clean up hazardous waste sites and releases or spills of hazardous material that may pose a threat to the public health or the environment. In addition, the department administers an alternative technology program that promotes technologies for reducing the amounts of hazardous waste disposed in or on land.

Program Administration

In 1981, the department created the Toxic Substances Control Division (toxics division) to continue to implement and enforce the California hazardous waste management program. The toxics division, which has its headquarters in Sacramento, has regional offices in Emeryville, Los Angeles, and Sacramento and a branch office in Fresno. The headquarters office coordinates policy and regulation, provides technical review and support, manages Superfund account and bond funds, and implements the statewide program. The toxics division conducts its field inspection and enforcement activities out of the regional and branch offices.

Most of the funding for the department's hazardous waste management program comes from fees collected from operators of hazardous waste disposal facilities, from haulers of hazardous waste, and from taxes collected from facilities that generate hazardous waste. In addition, the federal government provides monies to support the program, and bond monies are also available to clean up sites. In fiscal year 1986-87, the division was authorized approximately 596 positions and a budget of approximately \$40.4 million.

The department regulates the handling of hazardous waste by issuing permits to facilities that handle hazardous waste. Facilities in operation when the hazardous waste management program began and facilities that have since begun operating are required to apply to the department for operating permits. The department also registers haulers of hazardous waste and monitors the transportation of this material.

The department is also responsible for administering the Superfund program for cleaning up hazardous waste sites and releases of hazardous material that pose a threat to public health or the environment. In some instances, the cleanup of hazardous waste sites is conducted by the responsible party with the department providing oversight. These cleanups may be voluntary or the result of enforcement action taken by the department. In many instances, federal or state funds are needed to clean up a site. If a responsible party can be identified, cleanup costs may be recovered by the state and federal governments.

The department also promotes the use of alternatives to disposing of hazardous waste in or on land. The department offers grants for research, development, and demonstration of new technologies for reducing waste and conducts studies on ways to reduce hazardous waste. Additionally, the department assesses new waste treatment technologies and promotes the recycling of hazardous waste.

The toxics division's Alternative Technology and Policy Development Section is responsible for implementing the department's alternative technology program. In addition to encouraging and promoting alternatives to the land disposal of hazardous waste, this section performs other activities such as characterizing waste; assisting in permitting, enforcement, and site mitigation activities; and reviewing health and safety plans for cleaning up sites.

The Alternative Technology and Policy Development Section grew from a staff of 30 and a budget of approximately \$2 million in fiscal year 1982-83 to a staff of 54 and a budget of approximately \$4.9 million in fiscal year 1986-87. During fiscal year 1985-86, this section assigned 16 of its staff to work on waste reduction, resource recovery, and alternative technology.

Status of California's Hazardous Waste Disposal Facilities

According to department officials, no major hazardous waste disposal facility has received a final permit. In 1981, approximately

1.3 million tons of hazardous waste were disposed of at hazardous waste disposal facilities in California. In 1985, approximately 1.9 million tons of hazardous waste were disposed of. According to the chiefs of the department's regional permitting sections, only four major hazardous waste disposal facilities currently operate in California, and all of these facilities continue to operate under temporary permits issued by the department. However, there is currently one hazardous waste disposal facility, which accepts only certain wastes, that has a final operating permit. Also, the department has not issued a final permit to any generator who disposes of hazardous waste on-site. In 1984, approximately 1.1 million tons of hazardous waste were disposed of at 29 on-site disposal facilities, while in 1985, approximately 1.0 million tons of hazardous waste were disposed of at 22 on-site facilities.

According to department staff, changes in federal and state legislation and regulations have led to the closure of facilities whose operators failed to comply with requirements for obtaining operating permits. For example, the Environmental Protection Agency (EPA) revoked the temporary operating permits of 61 land disposal facilities in California that did not comply with the 1984 Resource Conservation and Recovery Act amendments. As a result, the number of hazardous waste disposal facilities is declining while the amount of hazardous waste disposed of is increasing.

In September 1986, in response to these problems, the Legislature passed legislation that establishes new requirements for establishing (siting) hazardous waste disposal facilities, for issuing permits to these facilities, and for using alternative technology to reduce hazardous waste. The Legislature enacted Chapter 1504, Statutes of 1986 (Assembly Bill 2948), in recognition of the need for hazardous waste disposal facilities that are environmentally safe. This legislation establishes new procedures for planning for hazardous waste facilities that involve local and state governments, the public, and industry. The Legislature also recognized the need for improving programs to reduce and recycle wastes. The Legislature's enactment of Chapter 1509, Statutes of 1986 (Senate Bill 1500), bans the disposal of liquid waste and untreated solid waste in landfills by 1990. The Legislature has declared that it is in the best interest of the public to establish a program to limit the use of land disposal practices that are unsafe and to promote alternatives for waste management.

SCOPE AND METHODOLOGY

The purpose of this audit was to assess the department's alternative technology program, its waste classification program, its siting and permitting of hazardous waste disposal facilities, and its scheduling methods for cleaning up hazardous waste sites. We reviewed the department's alternative technology program for January 1, 1980, through June 30, 1986. We also reviewed the department's performance in complying with state and federal laws and with department policies for promoting alternatives to land disposal.

In addition, we reviewed the 283 requests to classify wastes received by the department between January 18, 1985, and October 16, 1986. We also reviewed 58 requests made before January 18, 1985.

Additionally, we reviewed the department's procedures for scheduling cleanup activities at 51 state hazardous waste sites. Also, we reviewed the department's performance in applying for federal funds for cleaning up hazardous waste sites from July 24, 1985, to December 15, 1986.

In conducting this audit, we interviewed personnel in the department and in the toxics division. We also reviewed records at the toxics division's headquarters and at each of the regional offices. Additionally, we interviewed staff in the EPA and at the California Pollution Control Financing Authority; former employees of the toxics division; individuals employed by companies who generate, treat, store or dispose of hazardous waste; and individuals in the alternative technology programs of other states.

AUDIT RESULTS

I

THE DEPARTMENT OF HEALTH SERVICES CAN DO MORE TO ENCOURAGE ALTERNATIVES TO THE LAND DISPOSAL OF HAZARDOUS WASTE

State statutes mandate that the Department of Health Services (department) encourage and promote alternatives to land disposal. However, the department is not reviewing records of hazardous waste that is going to disposal facilities, and it has not used its authority to charge higher fees to generators who do not recycle hazardous waste when recycling has been determined to be economically and technologically feasible. In addition, from January 1, 1980, to June 30, 1986, the department completed only two studies of the hazardous waste generated by industry to determine if there are opportunities to reduce the amount of waste generated, and these were studies of materials that represent an insignificant amount of the hazardous waste generated in California. Moreover, the department did not use the results of one of the studies to encourage recycling or reduce hazardous wastes, even though it found that recycling opportunities exist. Finally, the department has not established an effective information clearinghouse or technical reference center. As a result of these conditions, some hazardous waste is being disposed of at the dwindling number of disposal facilities in California rather than being recycled. These conditions exist because the department is

not reviewing or measuring the effectiveness of elements of its alternative technology program and allocating resources to the most effective activities.

The Department Is Not Reviewing
Records of Hazardous Waste To Encourage
the Recycling of Hazardous Waste

The department is required by Section 25170 of the Health and Safety Code to encourage the reduction or exchange of hazardous waste. This code also requires the department to coordinate research and studies in managing hazardous waste as well as recycling and recovering resources from hazardous waste. In addition, this code requires the department to promote recycling hazardous waste and recovering resources from hazardous waste.

Section 25175 of the Health and Safety Code states that the department is to prepare and adopt, and may revise when appropriate, a list of hazardous wastes that the department determines are economically and technologically feasible to recycle. Section 66796 of the California Administrative Code includes a list of these hazardous wastes. In addition, Section 66763 of the California Administrative Code states that, within 180 days of the disposal of a recyclable hazardous waste on this list, the department may ask the generator to provide the department with a written statement justifying the disposal of the waste. If, after receiving the written statement, the department still determines that the recycling of this waste is

economically and technologically feasible, the disposer of the waste must recycle it. If the disposer fails to comply with an order to recycle the waste, the department can levy disposal fees that may be up to two times the base fee paid under the annual fee schedule, which range from \$1.21 a ton for treated hazardous wastes to \$48.32 a ton for restricted hazardous wastes.

Until January 1986, the department's Resource Recovery Unit reviewed "manifest" documents to identify recyclable hazardous wastes transported to disposal facilities. Manifest documents identify materials that are believed to be hazardous waste and must be completed by the companies that transport the hazardous waste. The Resource Recovery Unit also conducts studies of hazardous waste generated by industry to determine if there are opportunities to reduce the amount of waste.

In January 1986, the Resource Recovery Unit discontinued its review of manifests because, according to the chief of the Alternative Technology and Policy Development Section, reviewing manifests was not an effective use of his staff's time. The section chief further stated that this activity has never been evaluated to determine how effective it is. However, in our review of 155 letters that the Resource Recovery Unit sent to producers of recyclable hazardous wastes between January 1984 and May 1984, we found that 26 (17 percent) of the generators agreed to recycle their wastes.

In 1985, however, when the department reviewed manifests, it wasted staff time because it reviewed thousands of manifests but did not always follow up to ensure that the hazardous waste was recycled when it identified recyclable wastes. For example, the Resource Recovery Unit reviewed 8,500 manifests between January 1985 and October 1985 and did not contact any generators to inform them that it was economically and technologically feasible for them to recycle their waste. The supervisor of the Resource Recovery Unit stated that there was no followup after review of some manifests because his staff failed to inform generators within the required 180 days.

Furthermore, even though the department has the authority to charge higher fees to generators who continue to dispose of recyclable hazardous waste, the Resource Recovery Unit has not done this. The chief of the Alternative Technology and Policy Development Section stated that he did not believe that charging higher fees would be effective in getting generators to recycle wastes. However, he did agree that, since he has not charged higher fees, he cannot determine whether the higher fees would be effective or not.

Also, from January 1, 1980, to June 30, 1986, the department completed only two studies to determine if opportunities exist to reduce the amount of waste generated by industry. Further, the wastes studied constitute only a small portion of the total waste generated in California. For example, one of these hazardous wastes, lime sludge, constitutes less than one-half of one percent of all the hazardous

waste generated in the State in 1985. The chief of the Alternative Technology and Policy Development Section acknowledged that these two studies covered materials that represent an insignificant amount of the hazardous wastes generated in California.

Moreover, the results of one of the two studies were not used to encourage the recycling and reduction of hazardous wastes, even though this study concluded that recycling opportunities exist. For example, the department's August 1984 study of waste ink concluded that it was economically feasible for some newspapers to recycle waste ink. However, when we contacted the production managers of eight newspapers, who were sent questionnaires for the department's study, they stated that they were not aware of the project. Additionally, seven of the eight newspapers that were not recycling waste ink at the time of the study are still not recycling their waste ink.

Also, in its study, the department found that many newspapers were unaware that waste ink is a hazardous waste and were not treating it as such. However, the department did not inform these newspapers of the regulatory requirements for handling hazardous waste. The supervisor of the Resource Recovery Unit stated that the individual who performed the waste ink study left the unit after completing the study and there has been no follow-up work done on the study.

Because the department is no longer reviewing manifests, it is not as effective as it could be in encouraging and promoting the

recycling of hazardous waste. However, when the department did review manifests, it wasted staff time because it did not follow up to ensure that waste was recycled. Additionally, the department did not conduct studies of significant hazardous waste. The findings of one of the two studies that the department did conduct were not distributed to newspapers, even though the department found that recycling opportunities exist.

The Department Has Not Established an Effective Information Clearinghouse or Technical Reference Center

The department is required by Section 25170 of the Health and Safety Code to establish and maintain an "information clearinghouse." Every producer of hazardous waste is required to supply the department with information for the clearinghouse, and the department is required to make this information available to persons who want to recycle wastes. Section 25170 further requires the department to maintain a technical reference center on hazardous waste management practices including hazardous waste disposal, recycling practices, and related information for public and private use.

The department's Resource Recovery Unit established the California Waste Exchange (CWE) as the department's information clearinghouse for promoting the use, reuse, and exchange of industrial wastes. The CWE has three components: a directory of industrial recyclers, which is distributed annually; a catalog that lists

recyclable hazardous wastes available and wanted by industry; and a newsletter that consists of updates on laws and regulations and new technologies for recycling hazardous wastes. The catalog and newsletter are distributed to approximately 2,200 individuals or companies.

However, the information compiled by the CWE is not current and complete and is not adequately distributed. For example, 6 of the 24 companies we contacted, which have listings in the 1986 catalog, no longer have the hazardous waste available. One of the companies the department listed as having waste available in the 1986 catalog actually disposed of the waste in 1982. Furthermore, 12 of these companies have never received any inquiries from their listings, and 8 of the 12 companies receiving inquiries have never had a successful transaction as a result of the inquiries.

Further, the mailing list for the CWE has not been adequately updated since 1982. For example, the supervisor of the Resource Recovery Unit stated that in 1982, the Resource Recovery Unit obtained a mailing list from the Environmental Protection Agency (EPA) with the names of 8,000 generators of hazardous waste. The Resource Recovery Unit sent a brochure to these generators explaining what the CWE was and asking if they were interested in receiving these publications. Approximately 1,500 generators asked to be put on the mailing list. Additions to the mailing list since 1982 increased the number of interested individuals and companies to approximately 2,200. However,

other than periodic requests by companies or individuals to be included on the mailing list, the department has made no effort to update the mailing list since 1982. Approximately 23,590 (91 percent) of the department's estimated 25,800 generators of hazardous wastes are not on the CWE mailing list.

The information compiled by the CWE is not current and complete or adequately distributed because the Resource Recovery Unit does not consider keeping the CWE up to date a priority. The supervisor of the unit stated that his staff try to keep the information current but they don't always have time.

In addition, the department's Alternative Technology and Policy Development Section maintains a library on hazardous waste disposal, recycling practices, and related information. However, the material in the library on resource recovery, recycling, waste exchanges, and waste oil were so outdated that they were of little value to someone interested in current technologies to reduce hazardous waste. According to the department's librarian, "the library has a long way to go to be a good library. The library consists of a lot of dated material that should be thrown out."

In addition, the library contains very little information on what other states and countries are doing to reduce their reliance on the land disposal of hazardous waste. For example, we contacted two states--North Carolina and New York--and obtained information on

studies of waste reduction, waste audits, and waste exchanges that could be of value to personnel who are implementing the State's alternative technology program. However, none of this information was in the department's library.

Additionally, even though the Health and Safety Code Section 25170, requires the library to be accessible to the public, according to the supervisor of the Waste Reduction Unit, the library is set up and maintained for department personnel and is not intended for public use. Additionally, he stated that his unit does not advertise or encourage the public to use this library.

According to the chief of the Alternative Technology and Policy Development Section, the library became the responsibility of the Waste Reduction Unit in March 1985, and, at that time, the library consisted of "a room full of old books." He further stated that the library is being updated and that most of the new information is in the hands of personnel throughout the toxics division. However, according to the librarian, it is difficult to determine what materials are available throughout the department and who has them.

Causes of the Ineffectiveness of
the Alternative Technology Program

The conditions discussed above illustrate that the department is not as effective or efficient as it could be in encouraging and promoting alternatives to land disposal. We have also discussed some

of the causes for certain problems. However, the primary cause for most problems is the department's failure to review or measure the effectiveness of various elements of the alternative technology program and to allocate resources to the most effective activities. For example, the staff in the Resource Recovery Unit spend between 75 to 88 percent of their time in performing "technical assistance activities," which include answering telephone inquiries from the public and making site visits to facilities. However, the department has not analyzed technical assistance activities to determine how effective these activities are in relation to other program elements, such as reviewing manifests, conducting studies of hazardous waste, or classifying waste.

In addition, the supervisor and the three technical staff assigned to the Resource Recovery Unit spend 25 to 39 percent of their time answering telephone inquiries concerning recycling issues. However, the Resource Recovery Unit has not reviewed this activity to determine whether or not the telephone calls can be handled more efficiently. Some regional offices responded to a similar condition of having to deal with telephone calls by assigning a daily duty officer, who answers all telephone inquiries, and by developing a public information manual that contains answers to the most commonly asked questions. By improving their methods of handling telephone inquiries, the regional offices were able to free up staff who previously answered telephone inquiries to perform regular activities.

According to the supervisor of the Resource Recovery Unit, his staff is not performing other activities such as conducting waste studies or reviewing manifests because his staff is kept busy answering telephone calls on recycling issues. However, this unit supervisor further stated that he has not reviewed the activities of his unit to determine if there is a more efficient way of dealing with the numerous telephone calls.

Another reason for the ineffectiveness of the alternative technology program is that the department is not using all available methods for encouraging and promoting alternatives to land disposal. For example, the department is not referring individuals to the California Pollution Control Financing Authority, which may provide payments to reduce the interest rates on loans for recycling and reducing hazardous waste. Section 44558 of the Health and Safety Code authorizes the California Pollution Control Financing Authority to provide financial assistance through qualified financial institutions or agencies of up to \$250,000 to persons planning to finance projects for recycling, reducing, or treating hazardous waste. One supervisor in the Alternative Technology and Policy Development Section stated that he has referred several companies to the California Pollution Control Financing Authority for loans, but since the companies were not able to obtain loans, the section no longer refers companies to this agency.

Corrective Action Taken

On October 10, 1986, a department consultant completed a study of solvents, which constitute approximately 10 percent of all hazardous waste generated in California, to determine opportunities for recycling the solvents. In addition, the department sponsored Solvent Waste Alternative Symposiums in October 1986. Also, the technical library is now staffed with one full-time librarian and one part-time librarian.

CONCLUSION

State statutes mandate that the Department of Health Services encourage and promote alternatives to the land disposal of hazardous waste. However, the department is not reviewing information on the hazardous waste generated and disposed of by industry to encourage the recycling of hazardous waste. Additionally, the department conducted only two studies of the hazardous waste generated in California to determine opportunities for reducing waste, and these were studies of materials that represent an insignificant amount of waste generated in California. Furthermore, the department has not established an effective information clearinghouse or library and has not used one of its studies, which identified recycling opportunities, to encourage or promote waste reduction. As a result of these conditions, some recyclable hazardous waste is unnecessarily going to disposal facilities.

Additionally, because the library is not intended for public use, the department is foregoing opportunities for keeping the public informed on issues involving hazardous waste. These conditions exist because the department is not reviewing or measuring the effectiveness of elements of its alternative technology program and allocating resources to the most effective activities.

RECOMMENDATIONS

To improve its efforts to encourage and promote alternatives to the land disposal of hazardous wastes, the department should take the following actions:

- Review and measure the effectiveness of the elements of its alternative technology program to allocate resources to the most effective activities. For example, the department should consider reinstating reviews of the manifests on a pilot basis to study the effectiveness of these reviews. Also, the department should measure the effectiveness of any current or future studies to promote the reduction of waste;
- Once the department allocates resources to conduct certain activities, it should periodically review these activities to ensure that they are performed effectively

and efficiently. For example, the department should periodically review the effectiveness of the information in the CWE and update it;

- Use all available methods for encouraging waste reduction, such as promoting the use of low-interest loans to purchase equipment to reduce waste; and
- Update the technical reference center (library) and make it more accessible to the public.

II

THE DEPARTMENT OF HEALTH SERVICES
IS SLOW IN RESPONDING
TO REQUESTS TO CLASSIFY WASTES

The department does not classify wastes within 60 days after requests from generators are received, as mandated by Title 22 of the California Administrative Code. As of October 6, 1986, the department had a backlog of 114 requests to classify wastes; the average age of these requests was 223 days. The department has recognized that the delay in classifying wastes is a problem but has failed to direct adequate resources to resolve it. Because the department does not promptly classify wastes, the department estimates that, during fiscal year 1986-87, waste generators who request waste classifications will incur approximately \$22 million in additional costs. Also, some waste generators will unnecessarily reduce the limited capacity of hazardous waste disposal facilities by being required to dispose of approximately 112,000 tons of nonhazardous wastes in disposal facilities by the end of fiscal year 1986-87.

Section 66305, Title 22, of the California Administrative Code, effective January 18, 1985, requires waste generators to determine whether the wastes they produce are hazardous or nonhazardous. Waste generators who determine that their waste is nonhazardous may ask the department to approve their determinations. Section 66305 also allows the department to approve requests from waste

generators who want to classify and manage as nonhazardous a waste that is hazardous. Section 66305 requires waste generators to handle their wastes as hazardous until the department approves their requests. These state regulations also require the department to approve or disapprove requests within 60 calendar days.

The department does not always classify wastes within the required time period. During the 21-month period between January 18, 1985, and October 6, 1986, the department received 283 requests, pursuant to Section 66305, to classify wastes, an average of 13.5 requests per month. As of October 6, 1986, the department had not approved or disapproved 195 of these requests. Of the 195 requests, 114 (58 percent) are over 60 days old, and 5 (3 percent) are less than 60 days old; for the remaining 76 (39 percent) of the 195 requests, the department is waiting for further information from the requestor before making a determination. The average age of the 114 requests that are over 60 days old is 223 days. Additionally, the department did not approve or disapprove 58 requests that it received before January 18, 1985.

The department is aware of its delay in approving or disapproving requests but has not directed adequate resources to address this problem. During fiscal years 1984-85 and 1985-86, the department allocated one staff position and a part-time supervisor to this activity. However, the department frequently assigned the one staff position to other activities. For example, the department

approved only one classification request from January 18, 1985, through July 14, 1985, because staff were assigned to other activities. Also, when the department reviewed its waste classification activities between January 18, 1985, and October 18, 1985, it discovered that one person devoted only 23 percent of his time to classifying waste. The rest of this person's time was spent on other duties.

According to the supervisor of the waste classification program, the department has not approved or disapproved the 58 requests it received before January 18, 1985, because these requests were received before the effective date of the regulations. The chief of the Alternative Technology and Policy Development Section stated that the department contacted these requestors to inform them that they should resubmit their requests so that the department would be subject to the time limit. However, he could not provide us with documentation showing that the department contacted these companies or that any of the companies reapplied.

Because the department is not responding to requests within 60 days, waste generators may incur additional costs for handling nonhazardous waste as hazardous. The department estimates that, at the end of fiscal year 1986-87, the costs to industry to manage their

nonhazardous wastes as hazardous is approximately \$22 million.* These additional costs include disposal fees, transportation fees, and taxes on hazardous waste generation.

We contacted officials at eight companies that submitted requests for waste classifications to the department. We found that while the department is considering their requests, the companies are incurring over \$1 million in additional costs to handle their waste as hazardous. One environmental specialist stated that her company is incurring approximately \$83,000 per month in additional costs while the department considers the company's requests for classification. In another case, the department is aware of a company that is incurring an additional cost of \$8,000 per month while the department considers the company's request. These additional costs for handling the waste as hazardous may not be necessary if the department determines that the wastes are nonhazardous.

Additionally, some waste generators may be handling their hazardous wastes as nonhazardous while the department considers their requests. For example, we interviewed one company's compliance coordinator, who stated that, since he had not received a determination from the department within the 60-day time limit, he assumed that he could handle his wastes as nonhazardous. As of October 6, 1986, the department had not classified this waste.

*This \$22 million figure was in the department's budget change proposal for fiscal year 1986-87. We did not audit the validity of this estimate.

Finally, because the department does not promptly classify wastes, generators of nonhazardous waste unnecessarily reduce the limited capacity of hazardous waste disposal facilities. The department estimates that approximately 112,000 tons of nonhazardous material will be unnecessarily disposed of in hazardous waste landfills by the end of the fiscal year 1986-87 while the department considers requests for waste classification.

CONCLUSION

From January 18, 1985, to October 6, 1986, the department did not classify wastes of 114 generators who requested classification within the 60-day period mandated by Title 22 of the California Administrative Code. On the average, the 114 classification requests received since January 18, 1985, are 223 days old. Because the department has not assigned sufficient resources to address this delay in classifying waste, waste generators will incur, according to department estimates, an additional \$22 million in fiscal year 1986-87 to handle nonhazardous wastes as hazardous. Additionally, because some generators of waste handle their wastes as nonhazardous when the department does not classify their wastes promptly, these generators may be improperly disposing of hazardous wastes. Finally, generators of nonhazardous waste, who dispose of their wastes in hazardous waste disposal facilities while the department considers their requests, unnecessarily reduce the limited capacity of these facilities.

RECOMMENDATION

To reduce the backlog of requests for waste classification and to classify wastes within the 60-day time limit, the department should determine workload requirements for classifying wastes and allocate appropriate resources to this task.

III

SITE CLEANUP ACTIVITIES ARE NOT SCHEDULED ACCORDING TO A FORMAL MEASUREMENT OF THE RELATIVE THREAT OF THE SITES

The department did not use a process based on a formal measurement of the relative threats posed by cleanup sites when it developed its work schedules and allocated its resources for the characterization and cleanup of hazardous waste sites. Consequently, the department is scheduling and working on hazardous waste sites that may present less of a threat to the public and to the environment, as reflected by their assessment scores, before working on sites that present greater threats. According to the department's schedule, the department may not have sufficient funds to clean up 7 of the 51 state-funded hazardous waste sites. Of these 7 sites, 4 are among the 24 most threatening sites, as measured by their assessment scores.

The process for cleaning up hazardous waste sites is divided into five general phases: preliminary assessment, remedial investigation, feasibility study, cleanup plan development, and site cleanup. Preliminary assessment consists of determining whether a hazardous substance has been released into the environment. During a remedial investigation, precise identification of the type and extent of contamination is determined. The feasibility study determines the best method of cleaning up the site. These three phases are jointly referred to as "site characterization." Developing a cleanup plan

consists of presenting to the public the information gathered concerning the site and recommending a cleanup method. Site cleanup consists of implementing the adopted cleanup method. The department schedules the various phases of each cleanup site in its annual expenditure plan.

Section 25356(a) of the Health and Safety Code requires the department to adopt criteria for the priority ranking of hazardous waste sites for cleanup. According to Section 66953, Title 22, of the California Administrative Code, hazardous waste sites must be ranked for cleanup according to the procedures in the "Uncontrolled Hazardous Waste Site Ranking System, A User's Manual," published by the federal Environmental Protection Agency (EPA). This manual provides a scoring procedure that measures a site's relative threat to the public and to the environment. The department expresses these threats in a score with a maximum value of 300; the higher scores reflect greater threats to the public and environment than do lower scores. The sites can then be scheduled for cleanup activities by ranking them from the highest assessment score to the lowest. The department currently determines the assessment score for a cleanup site after characterizing the site. In addition, according to the department's chief of the Policy and Procedure Development Unit, funds for the cleanup of the site are set aside at this time.

Section 25356 of the Health and Safety Code further requires the department to place hazardous waste sites on one of three lists.

The first list includes sites that the responsible party is cleaning up and for which the department is providing only oversight and guidance. In its draft October 1986 update to its expenditure plan, the department placed 26 sites on this list and identified 178 other sites as potentially eligible for placement on this list. The second list includes state-funded cleanup sites that the department has not fully characterized. The department includes 27 sites on the second list and identifies 24 additional sites as potentially eligible. The third list includes state-funded cleanup sites that the department has characterized. The department includes only one site on the third list in its draft October update to its expenditure plan. The department is required to rank cleanup sites on the third list only and to fund the cleanup of these sites according to their ranking on this list. Although not prohibited by the Health and Safety Code, the department does not rank sites until after completing site characterization. The department publishes its three cleanup lists in its annual expenditure plan, which identifies hazardous waste sites to be cleaned up by responsible parties, the department, or the EPA.

The deputy director of the Toxic Substances Control Division stated that he directed his staff to schedule the cleanup activities and allocate resources for the May 1986 expenditure plan on the basis of their professional judgment of which sites most needed to be cleaned up because the expenditure plan needed to be presented to the Legislature and there was no time to develop and implement a standardized statewide priority system.

When the department scheduled cleanup activities and allocated resources, it did not use a process based on a formal measurement of the relative threats to the public and the environment posed by individual sites. As a result, the department's schedule for cleanup activities places sites that pose less of a threat, as reflected by their assessment scores, before sites that present greater threats. For example, in its draft October 1986 update to its expenditure plan, the department scheduled cleanup activities during December 1986 at six cleanup sites with assessment scores of less than 46.10 but did not schedule activities at a site that has an assessment score of 46.10 until May 1987.

Because the department did not use a scheduling and allocation system based on a formal measurement of a site's relative threat to the public and the environment, the department cannot ensure the availability of sufficient funds for completing cleanup activities at some of the most threatening, state-funded cleanup sites. For example, the department estimates that, unless additional funding is made available by the fall of 1988, it will be unable to procure contractors to implement the cleanup of all sites that have been characterized. We examined the department's expenditure plan to determine when the department scheduled the completion of characterization for the 51 hazardous waste cleanup sites for which state cleanup funds are to be used. According to the department's work schedules, the department may not have sufficient funds to implement cleanup at 7 of the 51 sites. Of these 7 sites, 4 are among the 24 most threatening sites, as measured by their assessment scores.

The chief of the department's Policy and Procedure Development Unit has recognized the problems surrounding the current method of scheduling work at sites and suggested in a memo to the department's deputy director that the department return to a "more rational and defensible way of prioritizing our use of all resources." He explained that it was not necessary to "invent something new for our purpose" and recommended using the EPA scoring procedure to assist in establishing priorities.

CONCLUSION

The Department of Health Services established work schedules and allocated resources for conducting cleanup activities at hazardous waste cleanup sites without considering a formal measurement of the relative threats posed by all sites to the public and the environment. Because the deputy director advised his staff to establish work schedules and allocate resources without developing a standardized priority method, the department scheduled work at hazardous waste sites that present less of a threat to the public and environment, as reflected by their assessment scores, before scheduling work on sites that present greater threats. According to the department's expenditure plans, the department cannot ensure that sufficient funds will be available to implement cleanup at 7 of the 51 state-funded sites. Of these 7 sites, 4 are among the 24 most threatening sites, as measured by their assessment scores.

RECOMMENDATION

The department should establish and implement a method for determining work schedules and allocating resources for the characterization and cleanup of specific hazardous waste sites listed in the department's expenditure plan. This method should reflect the relative threat of the sites to the public and the environment.

IV

THE DEPARTMENT OF HEALTH SERVICES
DOES NOT ALWAYS PURSUE FEDERAL FUNDS

The department does not always pursue federal funds to assess and clean up hazardous waste sites. For example, as of December 15, 1986, the department had not submitted a grant application for \$1.7 million to the EPA for conducting preliminary assessments of hazardous waste cleanup sites. As a result of the delay in submitting the grant application, the department stopped preliminary assessments at 15-20 locations. Additionally, as of September 25, 1986, the department did not apply to the EPA for funds for cleanup activities at 7 hazardous waste sites. The department also failed to address problems identified by the EPA after the department applied for listing 9 other sites on the National Priorities List (NPL). As a result of these conditions, the department has not yet received a \$1.7 million federal grant for conducting preliminary assessment activities and may not receive up to \$33.5 million for cleanup activities at 16 hazardous waste sites.

Criteria for Federal Funding

According to an NPL guidance manual for the EPA, "The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires . . . a list of national priorities which . . . describes known and threatened releases of hazardous

substances." The EPA developed the NPL to fulfill this requirement. To evaluate a cleanup site's eligibility for the NPL, states and regional offices of the EPA assess a site's threat to the public and the environment and determine a score based on this assessment. A site that has an assessment score of 28.50 or greater is eligible for listing on the NPL. According to the chief of the State Program Section for Region IX of the EPA, although the inclusion of a site on the NPL does not guarantee federal cleanup funds, only sites that are on the NPL are eligible for federal funding of cleanup activities. She further stated that, if a hazardous waste site is listed on the NPL, the federal government will pay up to 90 percent of the cleanup costs and that the EPA has always made federal funds available for all NPL sites in California when the site was ready to be worked on. The EPA also provides grant funds that enable states to conduct preliminary assessments of suspected hazardous waste cleanup sites.

Section 25358 of the Health and Safety Code requires the department to actively seek all federal funds to which it is entitled under the CERCLA.

Failure To Apply for Federal Funds
for Assessing Hazardous Waste Sites

The department did not apply for federal funds for conducting preliminary assessments at hazardous waste cleanup sites. The department had a \$751,758 grant, which expired on June 30, 1986, for conducting preliminary assessments. According to the program manager

of the department's abandoned site program, the department used this grant to conduct preliminary assessments at 347 hazardous waste sites in California. According to EPA staff, because the EPA's review and approval procedures may take as long as 90 days, the department should begin preparing a grant application for preliminary site assessment approximately four to five months before the expiration date of a current grant to ensure continuous funding. As of December 15, 1986, the department had not yet submitted its application for a \$1.7 million grant to replace the expired grant.

On June 19, 1986, the department applied to the EPA to amend the \$751,758 grant. The department asked the EPA for an additional \$150,000 to fund preliminary assessments through September 30, 1986. However, according to the chief of the State Program Section for the EPA, the EPA could provide additional funds for preliminary assessments to states only in one-month increments until the U.S. Congress reauthorized CERCLA. The chief of the department's Site Cleanup and Emergency Response Section stated that one-month extensions involved too much paperwork.

Failure To Pursue Federal Funds for Site Cleanup

The department is not always pursuing federal funds for cleaning up hazardous waste sites. We identified seven cleanup sites that have assessment scores greater than the minimum 28.50 required by the EPA and are therefore eligible for listing on the NPL. The

department determined the assessment score of six of the seven sites before October 7, 1985. As of September 25, 1986, the department had not applied to the EPA for listing any of these seven sites on the NPL.

In addition, the department has not responded to problems identified by the EPA concerning applications submitted by the department for including nine other state cleanup sites on the NPL. On or before August 7, 1985, the EPA rejected applications to include nine state-funded cleanup sites that the department determined to be eligible for listing on the NPL. The EPA rejected seven of the nine sites because the department did not provide adequate information and because the department made scoring errors. The department could not provide us with documentation showing why the EPA rejected the remaining two applications.

Effects of Failure
To Pursue Federal Funds

Because the department did not pursue federal funds, it stopped preliminary site assessment work at 15-20 locations and may unnecessarily spend an estimated \$33.5 million in state funds to clean up 16 sites whose cleanup could be funded by the federal government. According to the Program Manager of the department's Abandoned Site Program, the department stopped preliminary assessments at 15-20 locations when its grant for preliminary site assessments from the EPA expired on June 30, 1986. He further stated that, as of November 20, 1986, department staff had not resumed work at these locations.

Additionally, it will cost the State, according to department estimates, \$44.8 million to clean up these 16 hazardous waste sites. However, if the 16 sites, whose assessment scores are greater than 28.50, were listed on the NPL and federally funded, we estimate that the State would save \$33.5 million in cleanup costs.

According to the deputy director of the Toxic Substances Control Division, the department considers beginning the cleanup of hazardous waste sites a higher priority than applying for federal funds. He further stated that the department has been criticized in the past for not cleaning up sites and not spending state Superfund or state bond money. He also stated that it can be difficult and time-consuming to get a site listed on the NPL and that the department's time is often better spent cleaning up sites.

Corrective Action Taken

On October 9, 1986, the department's deputy director for the Toxic Substances Control Division issued a memo to the section chiefs of the regional offices requiring them to prepare applications for all hazardous waste sites eligible for listing on the NPL to maximize federal funding for hazardous waste site cleanup in California. Furthermore, on December 23, 1986, the department submitted a \$1.7 million grant application to the EPA to fund site assessments for 350 hazardous waste sites for the period February 1, 1987 through January 31, 1988.

CONCLUSION

The Department of Health Services does not always apply for federal funds for the characterization and cleanup of hazardous waste sites in California. As of December 15, 1986, the department had not yet submitted an application for a \$1.7 million grant for preliminary assessment of sites to the Environmental Protection Agency and has not sought to have all eligible cleanup sites listed on the National Priorities List. As a result of the delay in submitting the grant application, the department stopped preliminary assessments of 15-20 locations. Additionally, because the department does not pursue federal funds, the department could spend as much as \$33.5 million in state funds on cleanup sites eligible for federal funding.

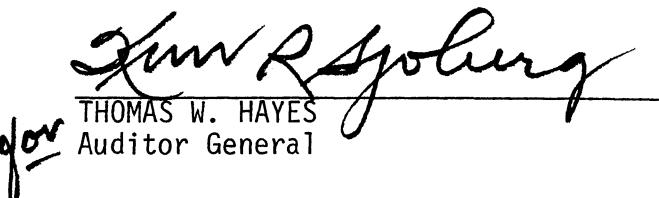
RECOMMENDATIONS

To enable the department to maximize the use of federal and state funds, the department should take the following actions:

- Apply for all available federal funds for the assessment of hazardous waste cleanup sites; and
- Actively pursue the listing of all eligible hazardous waste sites on the National Priorities List.

We conducted this review under the authority vested in the Auditor General by Section 10500 et seq. of the California Government Code and according to generally accepted governmental auditing standards. We limited our review to those areas specified in the audit scope section of this report.

Respectfully submitted,


for THOMAS W. HAYES
Auditor General

Date: January 20, 1987

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DEPARTMENT OF HEALTH SERVICES

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January 14, 1987

Mr. Thomas W. Hayes
Auditor General
660 J Street, Suite 300
Sacramento, CA 95814

Dear Mr. Hayes:

The Department wishes to thank the Office of the Auditor General (OAG) for its recent extensive review of Toxic Substances Control Division's Site Mitigation and Alternative Technology programs.

The Department was pleased to note that OAG did not find problems with the management of, and allocation of resources to, the majority of our work in either program area. OAG's comments on the less significant areas suggest that we should do more in them but does not recommend that additional resources be drawn from current activities. While we would have liked to have seen mention of some of the improvements to the major elements so that the reader would have been assured of a balanced description of our activities, we recognize that audits are intended to identify problems rather than focus on accomplishments. However, to assure that readers of this report have access to a complete program picture, we have attached a brief description of the omitted Alternative Technology program activities (Appendix 1).

With regard to OAG's specific comments on the Alternative Technology program, we find that they are mainly directed toward management judgment regarding resource allocation and direction of staff activity. Since the report findings raise questions of management judgement, and are, in part, based on incomplete or inaccurate information we do not concur with all of the findings.¹*For this reason, our responses will be directed to OAG's specific findings rather than the more general recommendations.

The same overall comments apply to the review of our Site Mitigation program. Here again, OAG's comments are focused on limited program processes and management decisions in this major and highly complex program. While we agree in principle with the recommendations in this portion of the audit, we believe the findings to be erroneous and misleading.¹

As an example, OAG's audit implies that the Department wasted over \$33 million because it chose to initiate action on serious toxic waste sites rather than first seek federal funds

*The Auditor General's comments on specific points contained in the Department of Health Services' response begin on page 65.

for the cleanups. By beginning work on these important sites the Department is insuring that they are addressed as quickly as possible while not waiting for the Federal Government to approve them for the National Priorities list. In fact, such a delaying action would be inconsistent with an inference made by OAG which suggests that the Department did not work on those sites which presented the greatest potential risk first.(2)

To delay work on a cleanup site pending federal approval would postpone work on some of the more serious sites for purely fiscal reasons. Rather than do this the Department made what it believes to be the correct management decision to begin work with State funds. This does not mean that the State, therefore, lost major amounts of federal monies. Quite the contrary, the Department fully expects many of these sites to qualify for federal assistance long before the more costly portions of the cleanup occur. DHS believes the people of California are much better served by this approach.

While the Department agrees with OAG's recommendation that it should develop a formal and verifiable ranking system, it strongly disagrees with the finding that site cleanup activities are not scheduled with regard to the relative threat of the site.(3) DHS staff are instructed to use professional judgement to assess those sites which have not yet been fully characterized to determine any potential risk to public health or safety. Those assessments have resulted in fence and post orders and other interim remedial measures.

It should be pointed out that the Department has received from the Legislature a series of different directions on how to approach site cleanup over the last several years. These changes in direction, as well as the constant influx of additional sites and additional information on site cleanups in progress, make it difficult to adhere to strict ranking criteria. While the Department agrees that a more formal process needs to be established, it has relied, and will continue to rely, on the judgement of its professionals to assess the priority of cleanup sites. It should not be concluded that the use of professional judgement in place of a rigid system puts the health and safety of the public at risk. This is particularly true when the audit conclusions are based on minor differences in one scoring process.

In the Alternative Technology area we concur with the problems identified in the program areas of waste classification, information clearinghouse and our Technical Reference Center. The Governor's budget contains a request to expand the waste classification program to deal with the concerns raised in the report. Likewise, we are again requesting the Legislature to approve an expansion of our information clearinghouse. We are

also requesting an expansion of our Technical Reference Center.

Our primary areas of disagreement with the audit concern OAG's findings regarding the methods by which we encourage waste reduction and recycling. We conclude that the methods suggested by OAG would be labor intensive and not as efficient or effective as the methods we have chosen.⁴ The detailed discussion of our reasons are attached.

We wish to thank you for the opportunity to provide our rebuttal to the OAG's recent audit of the Department's toxic program.

Sincerely,



Kenneth W. Kizer, M.D., M.P.H.
Director

Attachments

AUDITOR GENERAL FINDING NO. I

"THE DEPARTMENT CAN DO MORE TO ENCOURAGE
ALTERNATIVES TO LAND DISPOSAL"

Responses to specific audit findings are presented as follows:

A. Audit Finding:

"The Department is not reviewing information on hazardous waste generated and disposed of by industry to encourage recycling of hazardous waste."⁵

Department Response:

This audit finding is based on the assumption that the way to encourage recycling is through a manual review of the manifests. In the Department's judgement, this is no longer the most productive means of achieving improved waste management.⁵

Instead, it has implemented a variety of other activities such as the solvents waste reduction study and symposium, compilation and analysis of facility annual reports, waste audit studies of five targeted industries, and the U.C. Davis waste stream description study which is looking into waste stream components and concentrations.

The management decision to terminate the manual manifest review was based principally on the following factors:

- 1) The federally mandated replacement of the California Manifest by the Uniform National Manifest has made the manual review much less productive due to the lack of detailed waste component information;
- 2) The Land Disposal Restriction Program which has effectively banned many of the higher concentration (and thus more recyclable) waste from land disposal;
- 3) Diminishing returns on the time invested in this effort as much less recyclable waste is going to land disposal (due to a combination of rising disposal costs, land disposal restrictions and our past reviews of the manifests); and
- 4) The lack of statutory authority to force individuals to recycle since the law (Section 25175, Health and Safety Code) requires the generator (not the Department) to make the determination of economic feasibility (more said on this later).

Based on the above, a rigorous formal evaluation of tons recycled versus hours spent was deemed unnecessary.

B. Audit Finding:

The audit finds fault with the Department for not penalizing disposers by charging twice the hazardous waste fee. The report states that if the Department determines that the recycling of a waste is economically and technologically feasible, then the generator must recycle it, or the Department can make them pay twice the hazardous waste disposal fee.

Department Response:

This statement is in error. Section 25175(b) of the Health and Safety Code clearly states that before the Department can charge additional fees, one of two conditions must be met:

- 1) That the site operator (not the Department) has determined that recycling is economical and feasible at the site of production. Obviously, if the site operator determines recycling to be economically feasible, the operator will do so and no penalty fees will be necessary.
- 2) Or, that the Department has provided the name of a ready, willing, and able purchaser of the recyclable waste. This is often difficult. Most recyclers want a continuing supply of material rather than receiving a waste only once. A continuous supply reduces laboratory expenses and process changes.

Contrary to the audit report, it is not sufficient for the Department to merely make an independent assessment of the economic feasibility and assess additional fees based on this assessment.⁽⁶⁾

We believe it was the correct management decision to reallocate resources from a less productive to a more productive means of promoting recycling. It is more efficient to work with groups of people as the Department did with its Solvent Waste Management Seminars and the joint demonstration program with the California Cast Metal Association than use its limited staff resources to sort through manifests containing insufficient information and contact waste generators individually. For example, the Department reached 800 people when it conducted the solvent seminars, and 300 people with the joint demonstration program with the Cast Metal Association as compared to 125

people reached by the manifest review program in 1984 (which represented one half a person year).

C. Audit Finding:

"The Resource Recovery Unit Reviewed 8500 Manifests between January 1985 and October 1985 and did not contact any generators to inform them that is was economically and technically feasible for them to recycle their waste."

Department Response:

This is incorrect. According to our quarterly reports, copies of which were provided to the auditors, 35 letters were sent to generators during the period July 1, 1985 to September 30, 1985, alone.⁷

D. Audit Finding:

In summarizing the problems found, the audit states: "These conditions exist because the Department is not reviewing or measuring the effectiveness of elements of the Alternative Technology Program and allocating resources to the most effective activities."

Department Response:

The Department agrees that it should review and measure the effectiveness of program elements and allocate resources to the most effective activities. In fact, it is the Department's position that it did just that in regard to the OAG's chief area of concern: the cessation of manual manifest reviews for recycling opportunities.⁸

The management of the Alternative Technology Section decided in January, 1986 to shift its limited resources in this area (less than one person-year) away from manual manifest searches to areas where greater impact on recycling and other waste reduction techniques would be achieved. These areas include working with associations and industry groups that generate two of the most recyclable waste streams: waste solvents and waste oils. This management decision was made based on the points previously stated under Audit Findings A and B.

E. Audit Finding:

"The Department is conducting few hazardous waste studies to determine opportunities for reducing waste."

Department Response:

The Department disagrees with this audit finding. As listed below, the Department has produced numerous reports which have been used and cited by industry, the public, and universities in regard to reducing the land disposal of hazardous waste through waste reduction and recycling efforts. These reports include:⁹

- 1) Three Biennial reports titled "Alternative Technology for Recycling and Treatment of Hazardous Wastes" released in 1982, 1984 and 1986;
- 2) "Recycling and/or Treatment Capacity for Hazardous Waste Containing Cyanides," March, 1983;
- 3) "Recycling and/or Treatment Capacity for Hazardous Waste Containing Strong Acids and Dissolved Metals," October, 1983;
- 4) "Recycling and/or Treatment Capacity for Hazardous Waste Containing Polychlorinated Biphenyls," October, 1983;
- 5) "Recycling and/or Treatment Capacity for Hazardous Waste Containing Halogenated Organics," September, 1984;
- 6) "Economic Incentives for the Reduction of Hazardous Waste, December, 1985.
- 7) "Guide to Solvent Waste Reduction Alternatives," October, 1986;
- 8) "Solvent Waste Reduction Alternatives Symposium - Conference Proceedings," October 1986;
- 9) "Hazardous Waste Disposal Options for California Industry," January 1986.

Furthermore, the Department currently has five industry-specific waste audit studies underway and an RFP is being prepared for five more. In October of 1986, we completed a study and symposium on solvent waste management. Also, the Waste Reduction Grant program is sponsoring 26 waste reduction projects, with each producing a report upon completion.

F. Audit Finding:

"The Department ... has not used one of its studies which identified opportunities to encourage or promote waste reduction."

Department Response:

The Department does not concur with this audit finding. The study in question was on the subject of waste ink from newspapers. This study was summarized and distributed in two separate editions of the California Waste Exchange Newsletter Catalog. Each edition was distributed to over 4,000 companies and other interested readers. In addition, the report was given to the California Newspaper Publishers Association which represents the vast majority of the daily and weekly newspapers in the State. The Association subsequently alerted its membership to the report.⁽¹⁰⁾

Because the Legislature rejected the Administration's 86/87 budget request to create an Information Clearinghouse (which was to be used to widely distribute such studies), the Department directed its limited staff to work through its Newsletter and the Association to reach the targeted audience.

G. Audit Finding:

"The Department has not established an effective information clearinghouse or library" (Emphasis added.)

Department Response:

The Department concurs with the audit findings that the information clearinghouse and library are not as effective as they could be. For this reason, the Department proposed a major augmentation to the 1986/87 budget to allow for expansion of the program in these areas. The legislature rejected the budget changes for both the Technical Reference Center and the Information Clearinghouse. The Department is again making the request for the FY 1987/88 budget.

Even with the current lack of adequate funding for the Technical Reference Center (Library), much has been done recently to improve its operation and effectiveness. In the last year and a half, over \$15,000 has been spent on acquisition of new books. The holdings are being catalogued and computerized.

The Administration, in its FY 87/88 budget proposal, is requesting 6.6 positions and \$200,000 in contract funds for establishment of the Information Clearinghouse and one position and \$109,000 for equipment/printing for the expansion of the Technical Reference Center (library).

This program augmentation, if approved by the Legislature, will significantly improve the Department's ability to distribute information on latest technology developments as well as results of studies sponsored by the Department. Furthermore, it will enhance access to its collection of technical literature to both its staff as well as to the public. This should alleviate all criticisms of the Auditor General on this subject.

H. Audit Finding:

"Because the library is not intended for public use, the Department is foregoing opportunities for keeping the public informed on issues involving hazardous waste."

Department Response:

The Department concurs with the audit finding but believes that until a permanently established librarian position is created to staff the library and the holdings are catalogued, we should not widely advertise the availability of the library. However, if a member of the public requests information from the library, our student assistants help them in finding the needed data or publications.

I. Audit Finding:

The audit states the Department has made no effort to update the mailing list for the California Waste Exchange Newsletter Catalog.

Department Response:

The Department has approximately 2,200 persons on this mailing list. However, this is only part of the distribution. Usually, 4,000 copies of the Directory and 3,000 copies of the Newsletter/Catalog are printed. As many as 8,000 copies of each are sometimes printed and distributed. Copies are made available at regional offices and at numerous conferences and trade shows.

The Department has continually sought to update this mailing list. Staff routinely make presentations about the Waste Exchange at trade shows, seminars, and conferences dealing with waste management, and receive names of persons who want to be on the mailing list.

The audit suggestion that all 25,800 generators should be on the mailing list is not appropriate.¹¹ Many generators do not want to be on the list. Others have found satisfactory

ways of handling their wastes, or know that the wastes they have cannot be recycled.

J. Audit Finding:

The audit criticizes the Resource Recovery Unit for not keeping the contents of the catalog current.

Department Response:

The procedure used by the Resource Recovery Unit is that one month before the due date for the next catalog edition, each person listed in the previous catalog is contacted to see if the listing should be carried over into the next issue. This procedure should be sufficient; however, problems are encountered. Some companies want their waste listed even though they are presently recycling (in an attempt to get a better price for their waste). Often, companies change personnel making it difficult to locate a replacement of the former contact person. Frequently, the only company contact is a person in the business office who is not fully aware of their wastes, production processes or schedule. When interacting with such a company, erroneous information may often be received.

The Waste Exchange should not be faulted for listing wastes that no one has responded to or that no one has picked up. The most we can expect the Waste Exchange to do is to facilitate the process.

K. Audit Finding:

The Department is not referring individuals to the California Pollution Control Financing Authority (CPCFA) for financial assistance under Section 44558 of the Health and Safety Code. The audit infers that funding up to \$250,000 per project is available.

Department Response:

The audit bases this finding on a discussion with one person. There are other Department staff who do refer individuals to the CPCFA.

Health and Safety Code Section 44558 referred to by the audit has never been implemented by CPCFA. The CPCFA says that they must still adopt regulations to implement that particular section.⁽¹²⁾

The CPCFA still arranges for funding for pollution control equipment. They have been doing this through bonds even before Section 44558 was adopted. However, the minimum funding per project under the current CPCFA program is \$100,000, rather than an "up to" amount.

L. Audit Finding:

The audit suggests that the Resource Recovery Unit assign one person daily to respond to telephone calls. The audit states that this will free up staff to perform regular activities. This infers their method would result in a savings of staff time.

Department Response:

Obviously, the same number of phone calls will come in regardless of who answers the phone. Hence, the overall time spent on responding to phone calls will be the same. This particular unit made a management decision to assign specific areas of responsibility to each staff person. This allows for consistent responses to inquiries. It may actually take even more time to implement the audit suggestion which would require trying to make each person an expert in all program areas. We believe that would be an unwise management decision. (13)

AUDITOR GENERAL FINDING No. II

"THE DEPARTMENT IS SLOW IN RESPONDING
TO REQUESTS TO CLASSIFY WASTES"

Overall, the Department agrees with the audit finding that it doesn't have sufficient resources for waste classifications and that the resultant delays may cause generators substantial expense.

The reason why waste classifications were not a priority activity in the past is because of the 1984 changes to the regulations governing classification activities. In the fall of 1984, the regulations were amended to allow generators to use laboratories certified by the Department to test their wastes and then self-certify the classification of that waste. Only if a generator chooses to directly involve the Department in the classification process does the generator have to manage the waste as hazardous until the Department renders its decision. Thus, the decision to involve the Department is the generator's and his actions are voluntary.

Because so many generators in the last two years have voluntarily requested the Department's assistance, the Administration has proposed in its budget to the Legislature an augmentation of six positions. These positions, combined with existing staff, will eliminate the backlog of 256 applications within two years.

AUDITOR GENERAL FINDING NO. III:

"SITE CLEANUP ACTIVITIES ARE NOT SCHEDULED ACCORDING TO A FORMAL MEASUREMENT OF THE RELATIVE THREAT OF THE SITES."

Department Response:⁽³⁾

The Department agrees with the auditors that, at the time of their audit, the Department did not have a formal process for measuring the relative threat of sites.

The auditors point out that the Department does not use a numerical ranking system for priority setting until after the site characterization is completed. This is an accurate perception of a practice which has its basis in current state law. However, this is by no means the only criteria which are considered when staff schedule sites for cleanup. There are other means available to the Department which are used more and more frequently to deal with serious public health and environmental problems at sites. These include fence and post orders and Initial Remedial Measures and emergency actions. The Department is also utilizing a new priority screening tool, "The Toxic Triage Priority Setting Document" in the earliest stages of site cleanup to overcome the problem of priority setting. A draft copy of this document is attached (Appendix 2).⁽¹⁴⁾ It is currently being used by field staff and, we believe, clearly demonstrates a scientifically based method of setting priorities with public health and safety and environmental concerns given high regard.

Work is currently underway and the Department plans to have these improved priority-setting mechanisms in place by May, 1987. However, the Department believes that its interim management decisions and reliance upon professional judgement is reasonable and responsive to public health and safety and environmental concerns.

One of the Department's basic policies for scheduling cleanup at sites, whether privately or publicly funded, is to "finish what is started". This policy decision was made at a point in time when staff had been working on several sites which had been clearly ready for attention before others which though scheduled earlier, were not ready for reasons generally beyond the control of the Department such as legal actions and lack of funding. It would have been imprudent to cease work on sites where remedial action was underway in order to direct staff to previously scheduled sites which suddenly became ready for attention.

The law which establishes the Department's basis for setting cleanup priorities (H&S code 25356) has been amended by the Legislature each year since its original adoption in 1982. Each of those amendments mandated very substantial changes in the way sites are prioritized. For example, AB 129 (Chapter 1439,

Statutes of 1985) eliminated the requirements to prioritize any site being abated by responsible parties and required that only state funded sites be priority ranked and then only after they had been fully characterized.

The Auditor General acknowledges that the underlying policy decision for setting priorities in both the May 1986 and the draft October 1986 Expenditure Plan is consistent with basic requirement and intent of the Legislature as reflected by the passage of AB 129 and the recent enactment of SB 1891 (Chapter 1508 Statutes of 1986).

The language of the audit report may leave the reader with the mistaken impression that the Department made no effort to establish priorities in developing the current site mitigation Expenditure Plan. Actually the Department has clearly established priorities as indicated below:

State Funded Cleanups

The department established priorities by surveying the entire universe of currently known sites and identified those that were, or most likely would become, state funded cleanups either because responsible parties could not be identified or were presumed to be unwilling or unable to finance cleanup actions. Fifty of the 51 sites projected for state funded cleanup are scheduled for initiation of cleanup actions before June 30, 1987. The actual date of initial action may vary from site to site by several months, but it is significant that with the exception of 1 site, all state-funded sites will be addressed during the current year.

The remaining projected state funded site is not scheduled for activity until February of 1988 because it was judged to pose substantially lower public health hazards than other competing sites. The Department made the decision to give high priority to sites with a high potential to become state funded cleanups because it is believed that these sites, which all pose significant public health and environmental risks, would not otherwise be abated.

National Priority List Sites (or proposed)

Additionally, the Department placed a high priority on sites which are on or are proposed for listing on the National Priorities List (NPL). The Expenditure Plan has earmarked funds for all NPL sites in California and has allocated staff in the current and subsequent fiscal years to work on all those NPL sites which are currently a Department responsibility. This was done because all NPL sites pose significant health and environmental hazards and because the Department wishes to maximize federal cleanup funding.

Responsible Party Sites

Finally, the Department reviewed the residual pool of sites (all of which have identifiable RPs) and allocated staff to oversee RP-funded cleanup activity based on a combination of three factors: 1) relative public health/environmental hazard, 2) status of the site in the cleanup process, and 3) relative commitment and ability of the RPs to conduct a cleanup.

The Department also feels that comments are necessary with regard to two of the audit findings in this section of the report. Specifically, the auditors found that sites which had been formally evaluated and priority ranked at some point in the past were not always addressed in priority order as expressed by the the Expenditure Plan. The report indicates that six sites identified as having lower "assessment scores" are scheduled for the initiation of cleanup action several months ahead of a seventh (higher scoring) site. The Auditor identified the higher scoring site as the Harbor Way South site (score of 46.10) and the six lower scoring sites as Summer Del Caribe (43.94), Hillview-Eleanor Area Plume (42.24), Berman Steel Salinas (39.76), Verticare Helicopters (38.57), One Hundred Thirty ninth Avenue (35.34), and Factor Avenue (35.34). A search of the records revealed that new information had been developed on the Harbor Way site which reduced its overall score to 37.80. Given the small relative differences between these scores and the fact that work at all the sample sites was or will be initiated during the current fiscal year, the Department does not believe this audit finding to be significant.

The report also states that as a result of failure to consistently prioritize sites at the outset of cleanup activities, funding may not be available for all of the sites currently targeted for state funded cleanups including 4 sites that are among the "24 most threatening". It is true that funding may not be available to provide for the cleanup of all currently known hazardous waste sites in California, but this point is unrelated to the Department's method of prioritizing sites. The fact that additional funding will be required to address all known state funded cleanups has consistently been pointed out to the Legislature and the public by the Department and the Administration.

The Department's new Expenditure Plan warns that the existing need for cleanup funding is approximately \$170 million while only about \$80 million remains available of the initial bond funds. The Plan also notes that the need for funding is seriously understated by the \$170 million figure because many new sites will be discovered over the next several years and because cleanup costs are likely to dramatically increase as excavation and redisposal is phased out as a cleanup solution. Regardless of how sites are prioritized for cleanup, additional cleanup funding needs to be found.

The second point that needs to be made here is that the timeline for hazardous waste site cleanup is largely a function of site size and complexity. That is, relatively small and uncomplex sites can generally be "characterized" much faster than large complex ones (about 1 year for a small site compared to 3 1/2 years for a large complex one). Under current law, state funded sites are priority ranked for cleanup funding after site characterization has been completed.

AUDITOR GENERAL FINDING NO. IV:

"THE DEPARTMENT DOES NOT ALWAYS PURSUE FEDERAL FUNDS".

Department Response:⁽²⁾

The basis for this finding was twofold.

- A. The Department has not vigorously pursued inclusion of 16 sites currently projected for state funded cleanup on the National Priority List (NPL). Acceptance of these sites by EPA, would potentially save the state \$33.5 million based on currently estimated cleanup costs.
- B. The Department was not timely in submitting a \$1.6 million grant application to the Federal Environmental Protection Agency (EPA) to fund a hazardous waste site assessment program.

With regard to the first issue, the Department acknowledges that it may be in the best fiscal interests of the state to list as many sites which would otherwise be funded by the state on the NPL as possible. However, due to delays associated with getting projects listed and started, it may be better to get sites started and then listed on the NPL. Nevertheless, the Department is taking steps to submit site ranking data packages on all of the 16 sites which do not require additional field work within 45 days. In addition, the Department will review all remaining sites projected for state-funding which have not previously been formally scored, develop MITRE model scores for those with significant potential to be NPL eligible and forward site data packages on all potentially eligible sites within 120 days. However, in addition to taking this action, the Department wishes to point out several facts which in our opinion lessen the significance of this audit finding. First, the \$33.5 million figure is a "worst case scenario" and assumes that:

- o all 16 sites would be determined to be NPL eligible by EPA,
- o that the Department would never submit applications for any of these sites to EPA,

- o that all of these sites would ultimately be cleaned up with state funds, and
- o that the Department would be unsuccessful in retroactively recovering a single dollar from identified responsible parties or EPA.

The Department does not believe that any of these assumptions are justified.

It is important to note that cleanup activity at the sites in question are only at preliminary stages and that significant state expenditures have not in fact been made. It is also highly questionable that all 16 sites will be ultimately accepted for inclusion on the NPL based on the fact that EPA previously rejected 9 of the identified sites (some of which had been submitted to, and rejected by, the EPA on several previous occasions). For example, 7 of the 16 sites involve groundwater contamination with unidentified point sources of contamination.

EPA staff previously advised Department staff that EPA policy is not to include unidentified point source sites on the NPL and in fact the EPA has rejected Department nominated sites on this basis in the past.

It should also be noted that for much of the period in which the Department did not submit or resubmit site data packages, the federal Superfund program was exhausted and that new funding was only authorized in October, 1986. Achieving NPL status during the meantime would have been meaningless in terms of receiving federal funding.

Finally, a number of the 16 sites have identifiable and financially viable responsible parties. It is certainly possible that some of these RPs will ultimately decide to fund cleanup actions at some of the currently targeted sites. However, to the extent that state funds may ultimately be used to abate these sites, the Department will vigorously pursue full cost recovery plus interest.

The Department also feels compelled to point out the public health and environmental "downside" to getting sites listed on the NPL. Although it is true that sites listed on the NPL are subject to up to 100% federal funding for site characterization and 90% for cleanup, the sites are also subject to the federal budget process and funding decisions. Once sites are placed on the NPL the ability of the Department to use state funds to conduct essential activities at the listed sites is very limited under state law. In the past this has resulted in substantial delays in undertaking necessary cleanup and remedial actions at listed sites either because federal funds were not available or because EPA chose not to fund actions requested by the Department. To date no sites in California have gone through the entire Superfund process. To resolve this dilemma, the

Department is considering introducing legislation to amend state law to expand its ability to fund critical activities on listed NPL sites if federal funds will not be made available on a timely basis.

With regard to the second finding, the report seems to indicate that the Department lost \$1.6 million due to failure to submit the grant application earlier. In fact, the Department has not lost any funding. The net result of the late submission was a delay in receipt of the funds.

Furthermore, the delays encountered with respect to this issue were largely beyond the Department's control. In April 1986, the Department was informed by EPA that a new CERCLA grant application would not be required to obtain continuation funding. Instead the Department was advised by EPA to submit the necessary paperwork to amend and extend the existing (FY 1985/86) CERCLA grant. In June, 1986 the Department submitted a request to EPA to amend and extend the FY 1985/86 CERCLA grant as directed. Approximately one month later, EPA verbally responded to the request indicating that no concrete funding source was available. EPA further stated that the Department would be required to submit a completely new CERCLA grant package in order to obtain additional funds for conducting preliminary assessments and site inspections. The first draft of the new CERCLA grant was submitted to EPA in September, 1986 and a final signed version was submitted in December 1986. Thus, the Department has in fact diligently pursued Federal funding for conducting preliminary assessments and site inspections. However, due to unanticipated changes in grant application requirements and the one year funding hiatus of the federal Superfund, the process did not occur in an expeditious manner.

The auditor states that "Because the department did not pursue federal funds, it stopped preliminary assessment work at 15-20 cleanup sites..." A point of clarification needs to be made in reference to the statements regarding the 15-20 "cleanup sites." The term cleanup sites, as used in this report, is a misnomer due to the fact that a preliminary assessment is one of the first phases in the process of determining whether in fact a suspected site has received a discharge of toxic substances.

The 15-20 referenced "cleanup sites" were in fact not actual cleanup sites in that no verification of contamination existed at these sites. Verification of contamination is not made until after a preliminary assessment and site inspection with environment sampling has occurred. The auditors agree that no inappropriate use of State funds occurred as a result of the delayed application. Furthermore, it is our understanding that the auditors chief concern on this issue, that the preliminary assessments are delayed, i.e. work will not be done in a timely manner, is not an issue either since the files on the 15-20 sites

in question were returned to EPA in order that their contractors could do the assessment.

In conclusion, the Department wishes to point out an inherent conflict which appears to underlie findings III and IV. By stating, in Finding Number III that the Department did not use a formal measure of the relative threat of the site as a criterion for scheduling, the report invites a conclusion by the reader that the Department does not consider public health and environmental concerns as primary criteria in scheduling sites for cleanup activity. On the other hand, Finding IV criticizes the Department for proceeding with state funds for work on several sites which might qualify for federal funding.⁽¹⁵⁾

In the former case, public health and environmental concerns are suggested by the Auditor General as the most significant variables to be considered in the scheduling of work at sites. In the latter, the fact that the Department proceeded with state funds for work on these sites most likely to present risk to public health and the environment is characterized as a waste of those funds.

This appears to be a paradoxical evaluation which suggests that it is possible to "have it both ways". While the Department agrees that it sometimes proceeds with state funds on projects which might qualify for federal funding as stated in Finding IV, the Department points out that this is only done in cases where public health and safety and the environment are potentially at risk. If Finding Number III leads readers to believe that the Department does not consider public health and safety and environmental concerns as primary criteria in scheduling sites for attention, then the effect of that Finding will be to mislead and draw unwarranted criticism to the Department. It does not seem reasonable to be criticized as not placing public health and safety and the environment in high regard, on one hand, and for doing just that, on the other.

Appendix 1

ALTERNATIVE TECHNOLOGY EFFORTS NOT FAULTED IN THE AUDITOR GENERAL REPORT⁽¹⁶⁾

1. Land Disposal Restriction Program

a) California Land Disposal Restriction Regulation Implementation

The Department of Health Services began implementation of its land disposal restriction program in 1983. This has been used as a model for federal programs and is actually cited within the RCRA Amendments of 1984. The following waste streams were banned from all forms of land disposal: liquid hazardous wastes containing acids; heavy metals; cyanides; PCBs; and halogenated organics (in excess of contaminant specific threshold concentrations). As part of the program, staff prepared reports with information on technology available for treatment and recycling of these wastes as well as information on the amount of waste and treatment/recycling capacity available in California. Several significant treatment facilities were put into operation in California as a result of these restrictions and with direct assistance from the Department. These include: wet air oxidation for cyanide and organic wastes treatment at Casmalia; cement kiln incineration of waste solvents at General Portland; cyanide treatment at BKK, Otay and Kettleman Hills; SunOhio mobile PCB chemical destruction units; and the Stauffer Chemical Incinerator. This land disposal restriction program is being significantly expanded as part of the implementation of SB 1500. The Section's staff played a significant role in the development of this legislation.

b) Cooperation with EPA to Develop National Land disposal Restrictions and Waste Reduction Programs

Department staff are participating in the development of the national land disposal restriction and waste reduction program. Management and staff of the Alternative Technology Section work with the EPA's headquarter's Land Disposal Restriction Work Group. The Department strongly favors this cooperative effort as it will encourage use of treatment technology necessary to implement land disposal restrictions and remove the threat of low-cost neighboring-state disposal competition.

2. Technology Research and Demonstration Program

a) Cooperation with EPA in the Assessment of Emerging Technologies for Treatment of Hazardous Wastes

The Department has completed work on a \$500,000 EPA research and demonstration grant project which focused on evaluation and demonstration of several new waste treatment technologies. This project has contributed to siting and permitting of several treatment facilities. Technologies evaluated included: wet air oxidation (operating in Casmalia, Santa Barbara County); General Portland's rotary kiln (operating in Lebec, Kern County); Thaggard Fluid Wall process; GA Technologies' fluidized incinerator (tested in La Jolla, San Diego County); and Stauffer's liquid injection incinerator (tested in Carson, Los Angeles County).

b) FY 85-86 through FY 87-88, Cooperative Agreement with EPA

An FY 85-86 through FY 87-88 Cooperative Agreement with EPA (EPA contribution will be about \$1.3 million) is continuing the Department's evaluation and demonstration of new technologies contributing to development of treatment capacity to divert currently land disposed hazardous wastes or reduce generation of hazardous waste. Emphasis will be on demonstration of alternative technologies and strategies suitable for waste reduction by small generators.

c) Demonstration Projects

Through the efforts of the Remedial Technology Unit and the Alternative Technology Unit within the Section, over 20 demonstration projects are under way. These projects are designed to demonstrate the efficacy of each technology to the State's industries, local and State agencies, and the public. Demonstrations either completed or being scheduled cover the following technologies: incineration; vacuum extraction (of soil contaminated with volatiles); solidification processes; and biodegradation.

3. Waste Reduction Program

a) Industry Assistance

In 1984, the Department created a new Waste Reduction Unit within the Alternative Technology Section. With

limited treatment and land disposal capacity in the State, the objective of this program is to reduce the amount of hazardous waste being generated. Combined with the State's successful program to ban highly toxic wastes from land disposal and an industrial waste recycling program, California is the first state in the nation to have a balanced, well-focused program aimed at reducing industry's dependence on land disposal. A study and symposium on solvent waste management alternatives, studies of economic incentives, and a series of waste audits to assist small businesses in identifying source reduction, recycling and treatment options are being conducted by the unit.

b. Waste Reduction Grants Program

The Department worked very closely with the Legislature to develop the California Hazardous Waste Reduction Grant program (AB 685 - Farr) which is the largest program in the nation. As of January 1987, the Department has completed the first year of this program which makes \$1 million available to industries, universities, and local agencies to investigate and expand the potential for waste reduction. The funds are supporting 26 projects which address eight industries and more than 12 different waste streams. Technologies evaluation funded include, but are not limited to, source reduction, incineration, recycling, chemical treatment, freeze crystallization, mobile treatment systems, UV/ozone treatment and biological treatment.

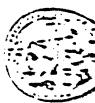
4. Permit Assistance for Alternative Technology Treatment Facilities

The Department has placed a high priority on the implementation of treatment technologies to reduce the amount of waste going to land disposal. To this end, the Alternative Technology Section has assisted the Regional Offices in permitting these facilities to assure the protection of public health and the environment.

The Alternative Technology Section has participated in the permit process for the following treatment facilities or technologies: SunOhio PCBX (mobile treatment of PCB oils); General Portland (incineration of liquid hazardous waste to recover heat); Stauffer Chemical Company (incinerator trial burn); supercritical water; wet air oxidation (in use at Casmalia); Applied Environmental Technologies (develop trial burn test procedures for mobile incinerator); Security Environmental Systems (rotary kiln incinerator); DOW Chemical Co (incinerator); Lawrence Livermore Laboratory

(incinerator); South Coast Asphalt Company (incinerator test); GA Technologies (incinerator trial burn); Chula Vista Appropriate Technology II (facility built to treat cyanides, acids, caustics, and heavy metals); Chemical Waste Management, Kettleman Hills (cyanide treatment and solidification facilities); and various other facilities including transportable treatment units.

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
SACRAMENTO, CA 95814



September 26, 1986

Dear Colleague:

For some time, I have felt that we needed a more objective method of setting work priorities for investigation of sites suspected of being contaminated with hazardous substances. I believe that this has become increasingly important as we have come to recognize that there are thousands of sites in California that are suspected of containing hazardous substances and which may present variable degrees of risk to public health and the environment.

In recognition of the large number of sites needing evaluation, and the need to prioritize investigation of such sites, we have developed a new methodology for screening sites for further investigation. This methodology, which we have entitled the 'Toxics Triage Priority Setting Document,' is intended to provide an objective and reproducible means of setting work priorities, and is similar in concept to various scoring systems which are used in emergency medicine (i.e., the concept of triage). Indeed, the Toxics Triage Document has been developed as a screening tool to assist in prioritizing the collection of data about sites suspected of being contaminated by hazardous substances.

The Department is currently evaluating use of the Toxics Triage Document in its abandoned site program, where it seems to have applicability as a guide for prioritizing efforts to further investigate suspect sites. (At the completion of the site evaluation process, the MITRE model will then be used to develop cleanup priorities for those sites that present a threat to public health or the environment.)

We feel the Toxics Triage Document will be very useful, especially to local officials, and I would now like to get your input about this new tool. I consider your input very important, and I would like to know how we can make it maximally useful. Please take the time to carefully review and comment about the document, both in regard to its usefulness in general and in regard to the specific descriptors listed, the scores for the different descriptors, the document's layout, etc. Please return your comments to me by November 21, 1986. Following receipt of your comments, we will carefully review them and revise the document as needed, with an expectation of getting it into use by the end of this year.

In advance, thank you for your review and comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Kizer".

Kenneth W. Kizer, M.D., M.P.H.
Director

Attachment ⑯

**AUDITOR GENERAL'S COMMENTS ON THE RESPONSE
OF THE DEPARTMENT OF HEALTH SERVICES**

- (1) In its response, the Department of Health Services asserts that our findings are "based on incomplete or inaccurate information" and that they are "erroneous and misleading." The findings we present in our report are fully documented and based on audit work that adheres strictly to nationally accepted auditing standards. For that reason, we stand by our conclusions. Additionally, because the department's response presents a number of issues not directly related to this audit, we limit our comments to specific points that the department raises about the alternative technology program (see notes 4 through 13, and note 16) and the Site Mitigation Program (see notes 2, 3, 14, and 15).
- (2) Our report does not imply "that the Department wasted over \$33 million because it chose to initiate action on serious toxic waste sites rather than first seek federal funds for the cleanups" nor does it state or recommend that the department delay cleanup activities at serious hazardous waste sites while pursuing federal funds. On page 37 of our report, we state that if the 16 sites whose assessment scores are greater than 28.50 were listed on the National Priorities List and federally funded, the State would save \$33.5 million in cleanup costs. Furthermore, on page 38, our report recommends that the department actively pursue the listing of all eligible hazardous waste sites on the National Priorities List, but it does not recommend that the department delay cleanup activities at these sites while pursuing federal funds.

Additionally, on pages S-1, S-3, and 33, our report states that the department had not yet received \$1.7 million in federal funds for conducting preliminary assessments. Furthermore, on pages 34 and 35, we state that, as of December 15, 1986, the department had not yet submitted its application for the \$1.7 million grant to replace a grant that had expired on June 30, 1986. We do not indicate that the department "lost" \$1.7 million (\$1.6 million in the department's response) because it failed to submit its grant application.
- (3) On page 27 of our report, we clearly state that the department did not use a process based on a formal measurement of the relative threats posed by cleanup sites when it developed its work schedules and allocated its resources for the characterization and cleanup of hazardous waste sites.
- (4) Our report does not recommend that the department implement methods that would be labor intensive and not as efficient or effective as the methods that it has chosen. As stated on pages 7 and 8 of our report, the department is not reviewing or measuring the effectiveness of elements of its alternative technology

program and allocating resources to the most effective activities. On page 19 of our report, we recommend that the department review and measure the effectiveness of these elements to allocate resources to the most cost-effective activities.

- (5) Our audit finding does not assume that the way to encourage recycling is through a manual review of the manifests. On page 19 of our report, we recommend that the department consider reinstating reviews of the manifests on a pilot basis to study the effectiveness of these reviews.
- (6) The department asserts that our interpretation of Section 25175(b) of the Health and Safety Code is incorrect. Our statement on pages 8 and 9 of our report is consistent with Section 25175(b) of the Health and Safety Code. Section 25175(b) states that "if . . . the department finds the recycling of a hazardous waste to be economically and technologically feasible at the site of production, as determined by the site operator, or, if the department provides the name of a ready, willing, and able purchaser of the recyclable waste, the disposer of the hazardous waste shall recycle the hazardous waste by either of the above described methods." Further, as stated on page 10, even though the department has the authority to charge higher fees to generators who continue to dispose of recyclable hazardous waste, the Resource Recovery Unit has not done this.
- (7) The department asserts that, according to its quarterly reports, 35 letters were sent to generators from July 1, 1985, through September 30, 1985. Our review of the department's records did not find copies of any letters sent between January 1985 and October 1985 informing generators that it was economically or technologically feasible to recycle the waste. Furthermore, the department could not provide us with copies of any letters written between January 1985 and October 1985 informing generators that it was economically and technologically feasible to recycle the waste.
- (8) According to the chief of the Alternative Technology and Policy Development Section, the manifest review activity has never been evaluated to determine its effectiveness.
- (9) On page 10 of our report, we state that from January 1, 1980 to June 30, 1986, the department completed only two studies to determine if opportunities exist to reduce the amount of waste generated by industry. Also, on pages S-4 and 18 of our report, we give credit to the department for completing two of the reports listed by the department in its response. The remaining reports listed by the department in its response were produced for reasons other than to determine if opportunities exist to reduce the amount of waste generated by industry. This information was verified by the supervisor of the Resource Recovery Unit.

- (10) As stated on page 11 of our report, the results of the waste ink reclamation project were not distributed to the production managers of eight newspapers who were sent questionnaires for the department's study even though the department found that recycling opportunities exist.
- (11) We do not suggest that all 25,800 generators be on the California Waste Exchange mailing list. As indicated on pages 13 and 14 of our report, we found that, other than including companies or individuals that periodically ask to be included on the mailing list, the department has made no effort to update the mailing list since 1982.
- (12) The deputy executive secretary of the California Pollution Control Financing Authority (CPCFA) stated that if a person or company with a project for recycling or reducing hazardous waste came into the CPCFA office on a referral from the department, the CPCFA would be able to initiate the process to provide that person or company with financial assistance under Section 44558 of the Health and Safety Code.
- (13) As stated on page 16 of our report, the Resource Recovery Unit has not reviewed the activity of responding to telephone calls to determine whether telephone calls can be handled more efficiently. Other state agencies have experienced similar problems and have developed methods for handling large numbers of telephone calls efficiently. For example, one office of the Employment Development Department reduced its backlog of claims by 62.5 percent by having some claim examiners answering telephone calls all day while other examiners only processed claims.
- (14) Only the cover letter of Appendix 2 is included in our report. The material not included in our report can be obtained from the Office of the Auditor General.
- (15) Our report does not conclude that the department does not consider public health and environmental concerns as primary criteria nor does it criticize the department for proceeding with work at cleanup sites which might qualify for federal funding with state funds. We recommend, on page 32, that the department establish and implement a method for determining work schedules and allocating resources for the characterization and cleanup of specific hazardous waste sites that reflect the relative threat of the sites to the public and the environment and, on page 38, that the department actively pursue the listing of all eligible hazardous waste sites on the National Priorities List.
- (16) The Office of the Auditor General did not review all of the areas included in Appendix 1 and, therefore, cannot comment on the validity of the information that the department provides.

cc: Members of the Legislature
Office of the Governor
Office of the Lieutenant Governor
State Controller
Legislative Analyst
Assembly Office of Research
Senate Office of Research
Assembly Majority/Minority Consultants
Senate Majority/Minority Consultants
Capitol Press Corps